

APPLICATION NO.: 10/697,064
ATTORNEY DOCKET NO.: 10030676-1
Page 3 of 11

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions and listings of claims in the above-referenced application:

1 1. (Currently amended) An apparatus comprising:
2 a ~~first~~ substrate, an optoelectronic device and a matching circuit formed on the
3 ~~first~~ substrate, the optoelectronic device having a frequency response and the
4 matching circuit configured to change the frequency response; and
5 a driver formed separate from the substrate, the driver configured to control
6 the optoelectronic device within a desired frequency range, wherein the substrate is
7 selectively flip-chip coupled via bond pads on the substrate such that the matching
8 circuit is interposed between the optoelectronic device and the driver ~~a matching~~
9 ~~circuit formed on the first substrate and coupled to the optoelectronic device to change~~
10 ~~its frequency response.~~

1 2.-3. (Canceled)

1 4. (Currently amended) An apparatus as in claim 3 1, wherein the
2 matching circuit is selected to match the frequency response of the optoelectronic
3 device to the driver ~~circuit~~ for optimal performance.

1 5. (Original) An apparatus as in claim 4, wherein the optoelectronic
2 device is a Vertical Cavity Surface Emitting Laser (VCSEL).

1 6. (Original) An apparatus as in claim 4, wherein the optoelectronic
2 device is an edge-emitting diode.

1 7. (Original) An apparatus as in claim 4, wherein the matching circuit
2 includes a passive device from the group consisting of inductors, capacitors, resistors,
3 stubs, and diodes.

1 8.-14. (Canceled)

APPLICATION NO.: 10/697,064
ATTORNEY DOCKET NO.: 10030676-1
Page 4 of 11

1 15. (New) An apparatus as in claim 1, wherein the driver
2 comprises an amplifier that communicates with and amplifies a signal from the
3 optoelectronic device.

1 16. (New) An apparatus as in claim 15, wherein the matching
2 circuit comprises multiple stages.

1 17. (New) An apparatus as in claim 16, wherein a select number of
2 stages are coupled between the optoelectronic device and the amplifier.

1 18. (New) An apparatus as in claim 17, wherein the matching
2 circuit includes a passive device from the group consisting of inductors, capacitors,
3 resistors, stubs, and diodes.

1 19. (New) An apparatus as in claim 4, wherein the optoelectronic
2 device is a photosensor.

1 20. (New) An apparatus as in claim 19, wherein the photosensor is
2 flip-chip mounted to the amplifier.